Programa Ambiente, Alterações Climáticas e Economia de Baixo Carbono

'Programa Ambiente'

Mecanismo Financeiro do Espaço Económico Europeu 2014 – 2021

Interim Report n.º 6 / Final Report

19/06/2023

19/Call #2_*SECClasS* - Sustainability Enhanced Construction Classification System

Accordingly, with the Articles 25.2.j) and 29.4 of the 'Applicants Guide for Financing of Projects Supported by Environment, Climate Change and Low Carbon Economy Programme'
https://www.eeagrants.gov.pt/media/2993/guia-para-o-financiamento-projetos-eea-grants_programa-ambiente_28112019.pdf

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i. Detailed description

This report covers the months of July to December 2022 i.e. quarters eight and nine of the SECClasS project. The project was extended one quarter: in the initial schedule the project would end at the end of semester eight, end of September 2022.

The *SECClasS* project aims to facilitate the Circular Economy in Construction by introducing a Building Information Classification System optimized for Sustainability. This system is oriented to the BIM methodology and serves not only the sustainability component, but also other phases and uses of a construction project, such as project management, BIM process management, quantification (quantity takeoff, or measurement from the model), compatibility of trades (clash detection) or work planning, and all phases of the life cycle.

This system is being used by design, construction and building management and maintenance professionals. It enables and unifies terminology at all scales, facilitating communication, selection of materials and components, as well as an accurate assessment of the impacts of buildings throughout their life cycle.

The ultimate goal is to improve the performance of buildings and reduce waste through digital management tools and informed selection of building elements.

Thus, the project asserts itself in three vectors:

1. To sensitize the public to the problem of the impacts of construction and its residues.
2. Develop appropriate solutions for professionals – architects and engineers - always prioritizing applicability over sophistication.
3. To sensitize the technical environment to the problem of circularity of construction materials and to promote the solutions developed with this technical environment.

In the third and fourth quarters of 2022 the project dealt mainly with the third vector, publishing several deliverables of the project and organizing events to disseminate the results of the project, which are reported below.

The following activities were developed:

- A1 - *Project* Management.

- A5 – Material and Construction Element Advice Online Tool.
- A6 - Pilot CICS Implementation and Validation.
- A7 - Dissemination and National Wide Implementation.

Table 1 summarizes the actions, organized by activity, adding a qualitative measure of execution (ongoing, executed, revised, postponed) and a column of observations/justifications. In the text below the table the actions developed in each of these activities are detailed.

Table 1 - Summary of the activties' development in the report timeframe (July - December 2022).

Activity	Actions	Status	Observations
A1 - Management	Internal meetings Project Management	Finished	Management meetings with the partners in the context of the tasks under development. Preparation of the closure of the project.
A2 - Concept	No activity	Finished	-
A3 - CICS	No activity	Finished	-
A4 - Objects	Product Data Templates BIM object library	Finished	The 2nd version was published, with improvements in terms of operation, of the national platform of national Product Data Templates (PDT) for construction products, available at https://secclass.pt/product-data-templates/. The library of BIM Objects with examples of BIM objects has been published, available at https://secclass.pt/biblioteca-de-objetos-bim/.
A5 - WebTool	SECClasS Search Tool Classification demonstrator Carbon Calculator	Finished	Preparation of the second, more interactive version of the SECClasS Classification System search tool, available at https://www.secclass.pt/pesquisa. Development of the pilot demonstration platform, where the classified BIM models can be explored interactively,

Activity	Actions	Status	Observations
			with publication of the remaining three classified models, available in https://secclass.pt/menu-de-demonstradores/.
A6 - Pilot	Finalization of pilot models	Finished	Publication of the remaining three classified models, available in https://secclass.pt/menu-de-demonstradores/. 5 models are available.
A7 - Dissemination	Presence in events and in the news Final event of the project at LNEC	Finished	Feeding the www.secclass.pt website and social networks Twitter, Linkedin and Youtube. Several actions of dissemination in person and online, where the final event at LNEC stands out, with the participation of the CEO of buildingSMART International and representation of the Norwegian embassy.

A1 - Project Management

Project team meetings

The project meetings were held mainly in the areas of the active tasks and in the public events where the partners participate.

Project management and monitoring

The project coordinator participated in the meetings convened by the SGA.

A2 - Conceptual Framework

This task is complete and has had no activity.

A3 - Sustainability-Enhanced Construction Information Classification System (CICS) for the Portuguese Reality

This task is complete and has had no activity.

A4 - Sustainability Oriented BIM Object Repository

The Product Data Templates platform has been updated, it is available at: https://secclass.pt/product-data-templates/. The improvement of the objects and their properties according to the comments continues.

The BIM Objects library was published. It contains examples of BIM objects built according to the Product Data Templates, containing the necessary properties for sustainability analyses, and the BIM Object Rules. It is available at https://secclass.pt/biblioteca-de-objetos-bim/. It will continue to be updated after the project.

A5 - Material and Construction Element Advice Online Tool

The second version, with improvements in execution speed, of the SECClasS Classification System search tool was published at https://www.secclass.pt/pesquisa.

The pilot demonstration platform has been published, where models classified with the SECClasS system can be explored interactively https://secclass.pt/menu-de-demonstradores/.

The tool for evaluating the embodied carbon of models of structures classified with the SECClasS system, according to the LEVEL(s) methodology, has been published in the project GitHub page. After the end of the project this tool continues to be developed in the framework of the PhD thesis of the researcher Sara Parece. It is currently (April 2023) being implemented in the company Quadrante Engenharia (https://www.quadrante-engenharia.pt/) and in the analysis of urban rehabilitation projects of the Lisbon City Hall.

A6 - Pilots

The webinar and accompanying notes for BIM modelling for quantification and estimation have been published. This manual is an important piece as it allows designers to learn about the BIM model building methodology that produces models that can be used for measuring material quantities, an essential step for circularity assessment. This work was developed by the Marta Campos Arquitectos / Norte Magnético studio.

It is available at https://secclass.pt/2023/02/27/webinar-marta-campos/.

Models of the remaining pilots have been published, available at https://secclass.pt/menu-de-demonstradores. There are 5 models available:

- Multi-family Residential Building (Atelier A-Lab)
- Single Family Residential Building (Marta Campos Arquitectos / Norte Magnético)
- Structural Rehabilitation of Reinforced Concrete Building (Iscte)
- Autodesk Revit Architecture Template (Iscte)
- Autodesk Revit Structural Model (Iscte)

A7 - Dissemination and National Wide Implementation

During this period, the project, its objectives, and results were continuously promoted through the website, social media, and in-person events. Several dissemination events were developed, including the final event at LNEC on December 12th. The events are reported below, with a link to the news article on the project's website. They are described in greater detail in the Annex.

Project promotion video

A video was produced to promote the project, available at https://youtu.be/Tn3e3t1WR9o.

SECCLASS on the Magazine of the National Engineers Association INGENIUM N.º 177 – July, August and September 2022 edition

The SECClasS project was mentioned in the Ingenium magazine's issue number 177, which covers the months of July, August, and September 2022. The magazine article highlighted the project's role as a facilitator for the digital transition of the construction industry.

Event on the 2022.07.14 - Practical Workshop: How to do a sustainability analysis with BIM today?

The SECClasS project coordinator, Ricardo Resende (Iscte-IUL), was a guest speaker at the CircularBIM project event held on July 14th at the ANJE Auditorium in Porto. The talk focused on the expeditious evaluation of embodied carbon in BIM models classified with the SECClasS classification system. (https://secclass.pt/2022/07/21/foi-apresentada-a-demo-da-calculadora-co2-secclass-no-seminario-pratico-como-fazer-uma-analise-de-sustentabilidade-com-bim-hoje/).

Participation on event on the 2022.10.12 - SECClasS in event Circular Economy in Concreta

Architect Marta Campos participated in Concreta 2022, invited by the Northern Regional Section of the Architects' Association. During the event, she showcased the work of Marta Campos Architects, highlighting their advanced digital practices. In particular, she emphasized their partnership with the SECClasS Project. (https://secclass.pt/2022/10/25/marta-campos-concreta/)

Participation in Antena 1 on the 20221115 - SECClasS na Antena 1 – 90 segundos de Ciência

On November 15th, Professor Ricardo Pontes Resende, coordinator of the SECClasS project, presented the project on the "90 seconds of science" program on Antena 1. (https://secclass.pt/2022/11/19/secclass-na-antena-1-90-segundos-de-ciencia/)

Event on the 2022.11.12 - SECClasS presented on the Brown Bag Tech Talk at Iscte

On November 30th, SECClasS researcher Sara Parece presented her work on "Addressing Material Efficiency in Building Renovation Scenarios: BIM-based Decision Support Tool" and the SeCClasS project at the ISTAR Brown Bag Tech Talk (https://secclass.pt/2023/01/05/secclass-no-brown-bag-tech-talk-no-iscte/).

Event on the 20221112 - The final event of the SECClasS project at the National Laboratory for Civil Engineering

The SECClasS project final event took place on December 12th at the National Laboratory of Civil Engineering and had both a physical presence and a live-streaming broadcast. The event was divided into two distinct parts. A morning session was held in the auditorium, where the project's main results were presented. This included presentations on the LEVEL(s) framework and buildingSmart International, as well as a roundtable discussion on EEA Grants projects. The afternoon session was a practical session where the project's developments were presented in more detail.

Event on the 2023.02.27- Webinar "BIM Modeling for Quantification - AIM" by Marta Campos Architects.

On February 27th, 2023, Marta Campos, an architect at Marta Campos Arquitetura e Reabilitação, hosted a webinar on "BIM Modeling for Quantification - AIM." During the webinar, she presented the BIM modelling philosophy that she has developed at her firm, which focuses on achieving projects with a high level of detail ready for construction and quantification (https://www.youtube.com/watch?v=AXjJOq3Fso4).

Participation on event on the 2023.03.02 - SECClasS project at the Architects' Association Congress.

Architect Inês Almeida (from A-Lab) presented the SECClasS project at the 16th Congress of the Portuguese Architects' Association, under the theme "Change Matters", which took place from March 2nd to March 4th in São Miguel, Azores.

ii. Results achieved

In the second half of 2022 there was not only greater intensity of dissemination, in the form of the final event of the project and the participation of project researchers in face-to-face events, online and in the media. It should be noted that the dissemination of the project, despite having already achieved all the proposed goals, continued beyond the date of completion of the project.

All major project deliverables were delivered and are available at www.secclass.pt. The major project deliverables are condensed here:

- Activity 2 – Report on classification systems + choice of the system to adopt
- Activity 3 – Translation of the Classification System (> 15000 terms) + translation of norm ISO 12006-2 (extra)
- Activity 4 –BIM object manual + BIM object library + Product Data Template platform (extra)
- Activity 5 – Classification System search tool + Carbon calculated for BIM models based on the Classification System
- Activity 6 – Five pilot BIM models
- Activity 7 – More than ten events + scientific papers + presence in media (national tv and radio)

The authorization for the extension of the project until the end of 2022 (see final schedule in Table 2) for another three months beyond the initially planned date (30 September 2022), was extremely valuable, as well as the granting of the budget amendment request, which allowed the execution of funds related to the final event in December 2022.

Table 2 - Updated project chronogram.

Annex I

19/Call #2_SECClasS - Sustainability Enhanced Construction Classification System

c) Calendar by Activity

ID Atividade / Activity ID	Promotor / Parceiro - Promoter / Partner	2020										2021												2022											
		3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
A1_MANAGEMENT	ISCTE-IUL																																		
A2_CONCEPT	LNEC																																		
A3_CICS	ISCTE-IUL																																		
A4_OBJECTS	UMINHO																																		
A5_WEBTOOL	ISCTE-IUL																																		
A6_PILOT	LNEC																																		
A7_COMM&DISSEM	ISCTE-IUL																																		
									1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Meses adicionados à atividade

Meses retirados à tarefa

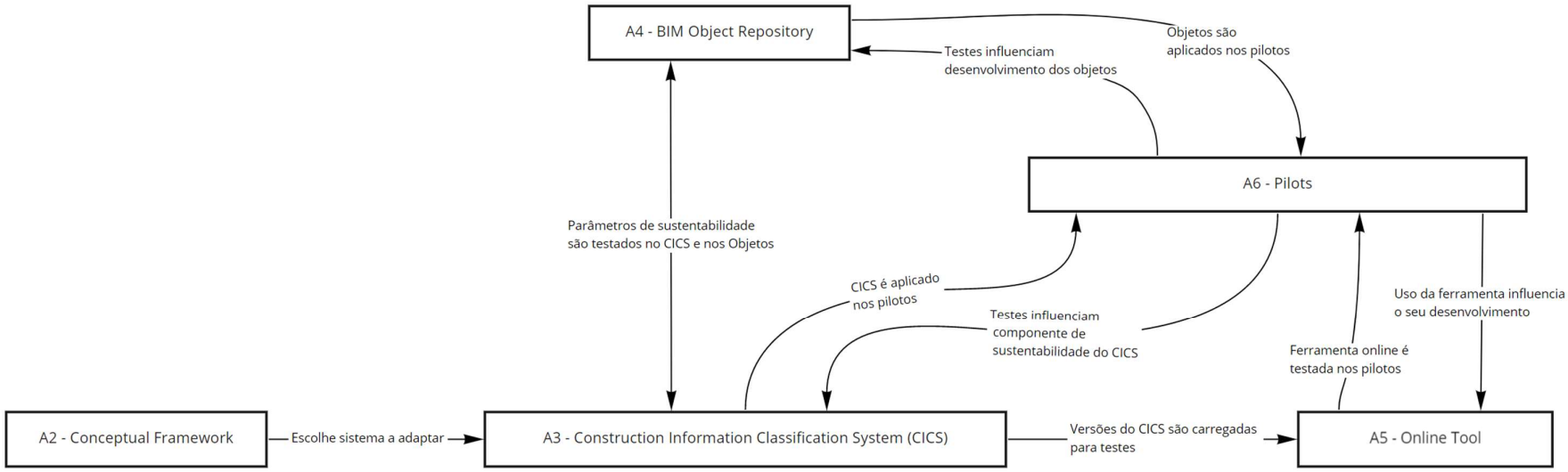


Figure 1 - Schematic architecture of the project activities.

iii. Description of costs and financial impact assessment

The following table summarizes the final costs per partner and activity for the entire project, including the data for the 8th and 9th quarters .

Table 3 – Project finantial execution by partner and activity.

Activities / Entities	Expenses (inc. direct costs)		Finantial execution (%) (face ao custo total)	
	in the reported period	cumulative	in the reported period	cumulative
A1				
ISCTE	7 178,81 €	14 123,24 €	51%	100%
LNEC	0 €	379,00 €	0	100%
UMinho	0 €	357,76 €	0	100%
A-lab AS	0	0	0	0
Norte Magnético	0	0	0	0
Total A1	7 178.81 €	14 860,00 €	48%	100%
A2				
ISCTE	0€	660,93 €	0%	100%
LNEC	1 745,35 €	10 372,55 €	17%	100%
UMinho	18,78 €	178,88 €	10%	100%
A-lab AS	0 €	3 871,45 €	0%	100%
Norte Magnético	7,30 €	1 787,28 €	0%	100%
Total A2	1 771,43 €	16 871,09 €	11%	100%
A3				
ISCTE	3 762,49 €	26 664,74 €	14%	100%

LNEC	165,37 €	4 253,20 €	4%	100%
UMinho	0 €	1 431,05 €	0%	100%
A-lab AS	0 €	3 871,45 €	0%	100%
Norte Magnético	427,25 €	1 618,13 €	26%	100%
Total A3	4 355,11 €	37 838,57 €	12%%	100%
A4				
ISCTE	95,85 €	536,64 €	18%	100%
LNEC	0 €	969,55 €	0%	100%
UMinho	4 554,30 €	32 644,34 €	14%	100%
A-lab AS	314,81 €	2 903,59 €	11%	100%
Norte Magnético	0 €	1 531,95 €	0%	100%
Total A4	4 964,96 €	38 586,07 €	13%	100%
A5				
ISCTE	6 130,20 €	34 097,50 €	18%	100%
LNEC	579,74 €	2 264,10 €	26%	100%
UMinho	208,53 €	790,16 €	26%	100%
A-lab AS	2 595,57 €	4 705,57 €	55%	100%
Norte Magnético	63,07 €	1 276,63 €	5%	100%
Total A5	9 577,11 €	43 133,96 €	22%	100%
A6				
ISCTE	5 571,89 €	6 443,41 €	86%	100%
LNEC	18 077,86 €	32 948,76 €	55%	100%
UMinho	8,82 €	715,53 €	1%	100%
A-lab AS	2 827,68 €	12 486,69 €	23%	100%

Norte Magnético	4 502,76 €	11 322,34 €	28%	100%
Total A6)	30 989,01 €	63 916,73 €	48%	100%
A7				
ISCTE	932,60 €	18 759,58 €	5%	100%
LNEC	11 469,83 €	24 034,50 €	48%	100%
UMinho	4 844,65 €	6 488,82 €	75%	100%
A-lab AS	1 361,17 €	5 179,12 €	26%	100%
Norte Magnético	2 297,93 €	2 297,93 €	100%	100%
Total A7	20 906,18 €	56 759,95 €	37%	100%
TOTAL	82 662,60 €	303 915,71€	27,20%	100%

Table 4 - Project finantial execution by Partner.

ENTIDADES/ Totais	**Despesa (com custos indiretos)**		**Taxa de execução financeira (%) (face ao custo total do projeto/entidade)**	
	no período de reporte	Cumulativa	no período de reporte	Cumulativa
ISCTE	26 061,68 €	113 038,81 €	23%	100%
LNEC	34 285,50 €	82 744,39 €	41%	100%
UMinho	10 192,60 €	48 140,17 €	21%	100%
A-lab AS	4 153,99 €	37304,10 €	11%	100%
Norte Magnético	7968,83 €	22 687,52 €	35%	100%
TOTAL	82 662, 60€	303 915,71€	27,20%	100%

iv. Description of the Project's contribution to achieving the overall objectives of EEA Grants and the 'Environment Programme'

According to the time and financial planning of the project, updated by the granted extensionrequest until the end of 2022, during the second half of 2022 the final deliverables were published and there was a great deal of dissemination activity, which continued after the official completion of the project.

It is also noteworthy that several lines of work started in the project are being continued through:

- PhD theses of the fellows Sara Parece (MIT Portugal scholarship) and Rodrigo Lima (National Laboratory of Civil Engineering scholarship).

- continued development of the carbon calculation tool incorporated and applied by national companies, highlighting the application in a pilot by the engineering and architecture office Quadrante (https://www.quadrante-engenharia.pt/).

- dissemination of the classification system through a partnership with buildingSMART Portugal (https://buildingsmart.pt/).

- continued development of the BIM object library and Product Data Templates in REV@CONSTRUCT project.

It is difficult to quantify the impacts of the project because it provides tools that are the basis of more efficient processes in the use of materials and the design of more sustainable buildings. The report is presented in the format of the objectives of the Environment Program, on Table 5, leaving in footnote the comments on how the values presented were estimated.

Table 5 - Project contributions for the Program goals.

PA	Expected Programme results	Indicator	Baseline value	Baseline year	Target value	Project contribution until today	Related activitiess
PA11 Outcome 1	Increased application of circular economy principles in targeted sector	Construction and demolition waste avoided by the supported sectors (percentage)	48,6%	2017	70,0%	5%	A3,A4,A5*
		Number of jobs created (disaggregated by gender, age)	25	N/D	25	1 female, 2 male (under 30 years old)	All€
		Tons of plastic recycled through all supported schemes/measures	0	N/D	20000	0	-
		Use of secondary materials increased in the supported sectors (percentage)	0%	N/D	15,0%	0	-
Output 1.4	Increased resource efficiency in the construction sector	Number of SMEs Supported	0	N/D	5	1	A5$
		Number of demonstration buildings constructed	0	N/D	3	5	A6+
		Number of Innovative solutions for increased resource efficiency piloted	0	N/D	5	1	A5 #

* estimated construction materials saving through the adoption of the SECClasS classification system and BIM methodologies in building construction design.

€ three of the project young researchers are pursuing PhDs in Architecture / Civil Engineering after the end of the project.

$ Company (Quadrante) testing the SECClasS Carbon calculator in its practice.

+ 5 pilots consisting of BIM models of buildings classified with the SECClasS classification system.

Carbon calculator based on the SECClasS classification system.

Project Promotor

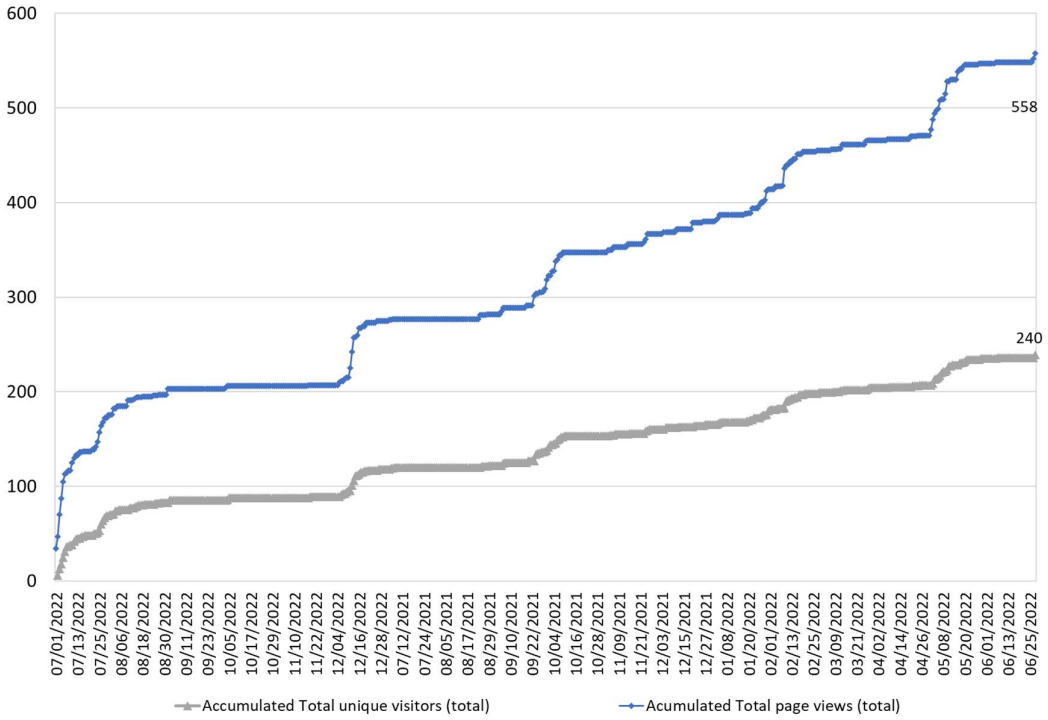
Name	Assinado por: **José Ricardo Pontes Resende** Num. de Identificação: 11004345 Data: 2023.06.19 16:38:26+01'00'
Date and Signature	Ricardo Pontes Resende
Position	**Assistant Professor, Iscte – Instituto Universitário de Lisboa**

Programme Operator – Secretary General for Environment

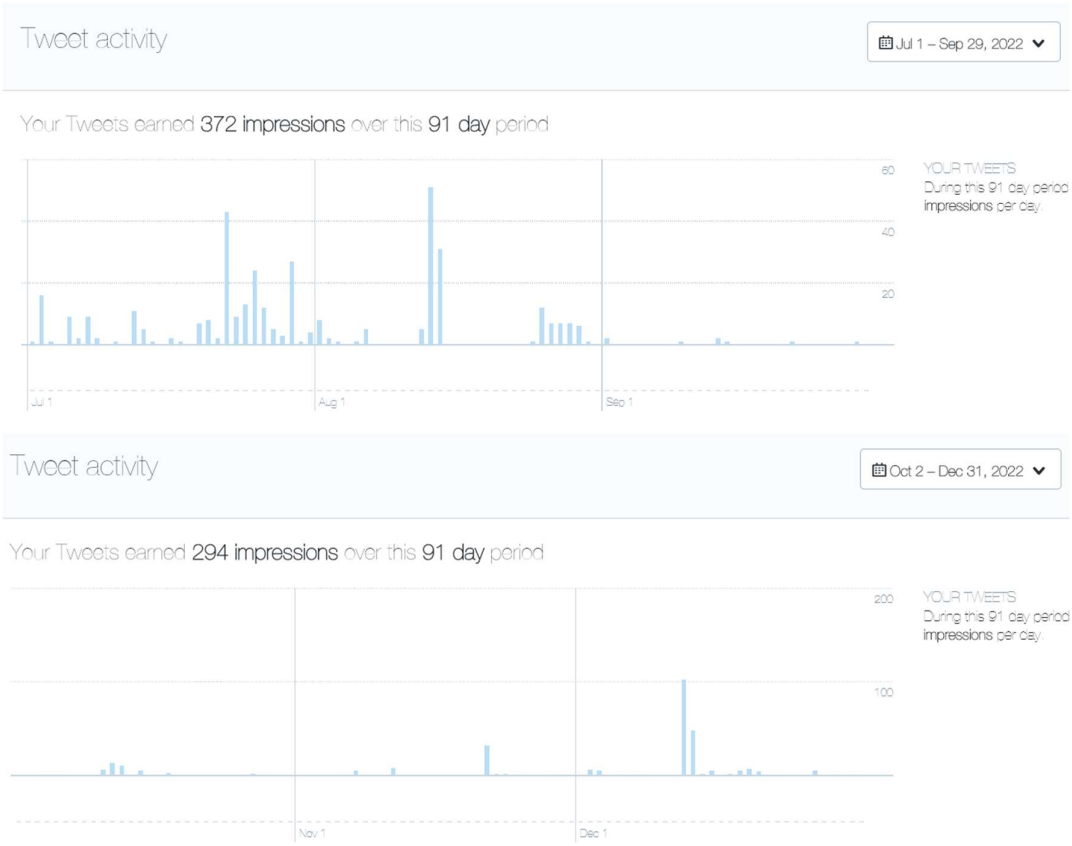
Name	**Marco Rebelo**
Date and Signature	Marco Rebelo Assinado de forma digital por Marco Rebelo Dados: 2024.01.24 10:00:20 Z
Position	**Director of Secretary General**

v. Anexes

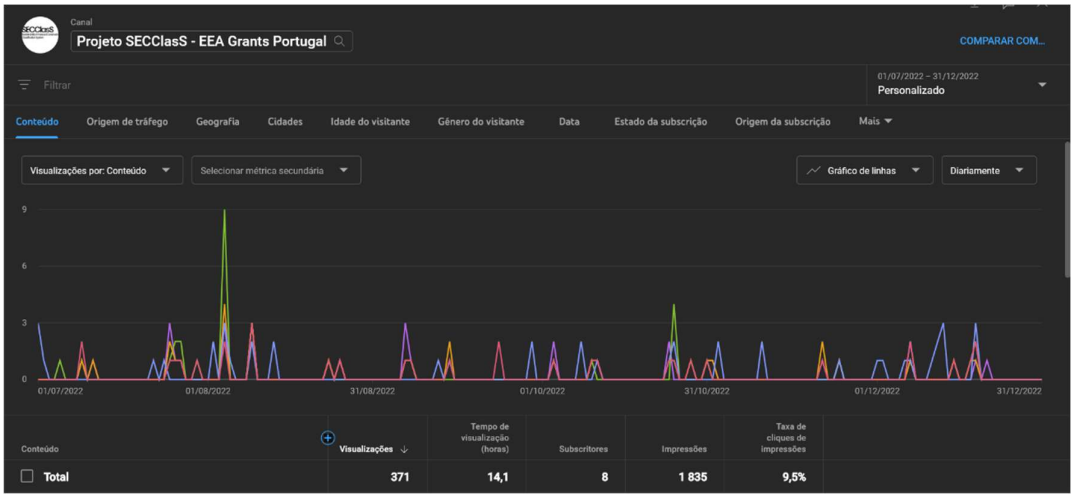
Social networks and site statistics



Visitors' statistics to the Linkedin page between 1 July and 31 December 2022

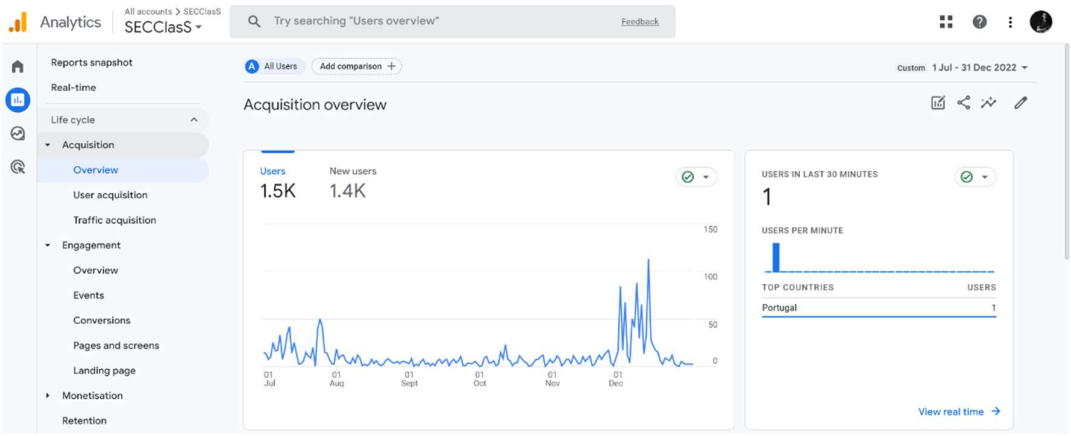


Visitor statistics on the Twitter page between 1 July 2022 and 31 December 2022.

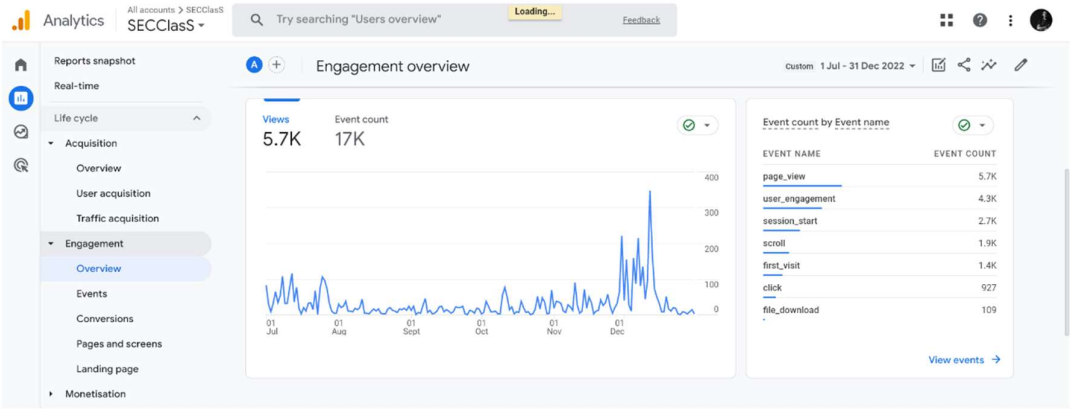


Youtube view statistics for the period reported in this report (July 2022 to December 2022).

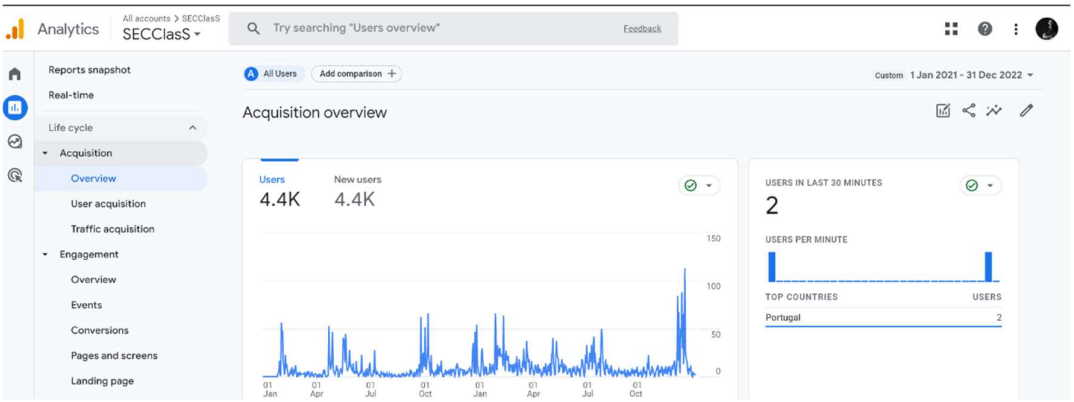
Youtube view statistics throughout the project (January 2021 (channel launch) to December 2022).



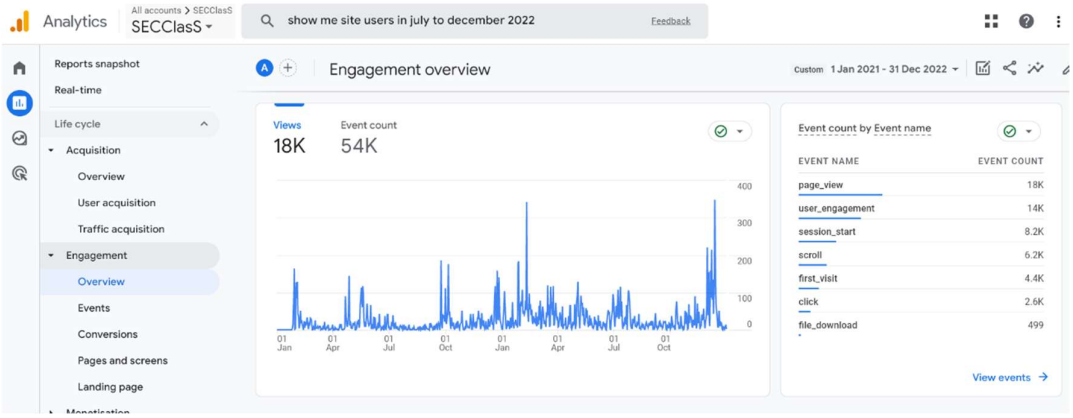
Website access statistics www.secclass.pt: total unique users of the page in the period reported in this report (July 2022 to December 2022).



Website access statistics www.secclass.pt: Total page views in the period reported in this report (July 2022 to December 2022).



Website access statistics www.secclass.pt: total unique users of the page throughout the project (January 2021 (website launch) to December 2022).



Website access statistics www.secclass.pt: total page views throughout the project (January 2021 (website launch) to December 2022).

Event Reports

20220714 - Practical Workshop: How to do a sustainability analysis with BIM TODAY?

The SECClasS project coordinator, Ricardo Resende (Iscte-IUL), was a guest speaker at the CircularBIM project event held on July 14th at the ANJE Auditorium in Porto. The talk focused on the expeditious evaluation of embodied carbon in BIM models classified with the SECClasS classification system.

The SECClasS team has been developing a calculator for measuring CO2 in construction projects based on classified BIM models. The calculator will soon be available on the SECClasS website (https://secclass.pt/apps/), and some of its features were demonstrated at the event.

20221012 - SECClasS in event Circular Economy in Concreta

Architect Marta Campos was invited by the Northern Regional Section of the Architects' Association to participate in Concreta 2022. During the event, she showcased the work of Marta Campos Architects, highlighting their advanced digital practices. In particular, she emphasized their partnership with the SECClasS Project (https://secclass.pt/2022/10/25/marta-campos-concreta/).

20221112 - SECClasS presented on the Brown Bag Tech Talk at Iscte

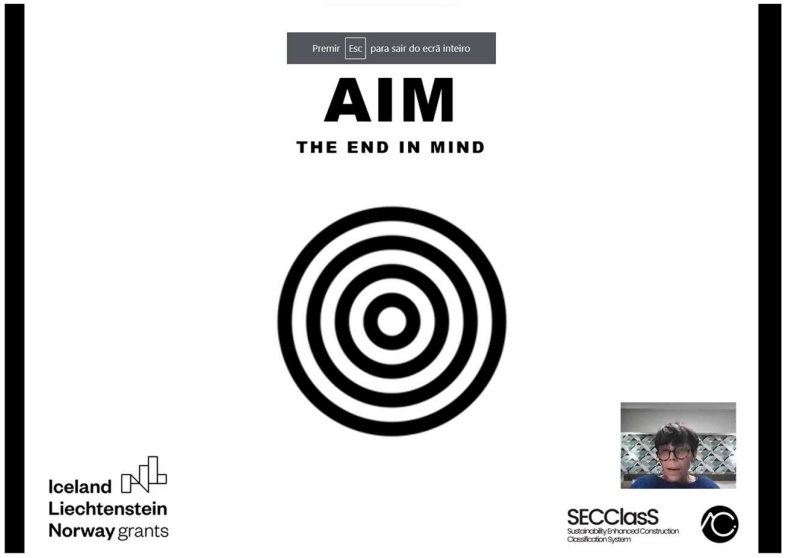
On November 30th, SECClasS researcher Sara Parece presented her work on "Addressing Material Efficiency in Building Renovation Scenarios: BIM-based Decision Support Tool" at the ISTAR Brown Bag Tech Talk. Sara Parece's doctoral thesis is directly related to the work developed in the SECClasS project. Her research focuses on material efficiency approaches in building renovation scenarios, considering sustainability issues, scarcity of material and human resources, and changes in urban renovation processes. To address these challenges, she is developing decision support tools based on BIM methodology using SECClasS classification (https://secclass.pt/2023/01/05/secclass-no-brown-bag-tech-talk-no-iscte/).

20221112 - The final event of the SECClasS Project at the National Laboratory for Civil Engineering

The SECClasS project final event took place on December 12th at the National Laboratory of Civil Engineering and had both a physical presence and a live-streaming broadcast. The event was divided into two distinct parts. A morning session was held in the auditorium, where the project's main results were presented. This included presentations on the LEVEL(s) framework and buildingSmart International, as well as a roundtable discussion on EEA Grants projects. The afternoon session was a practical session where the project's developments were presented in more detail.

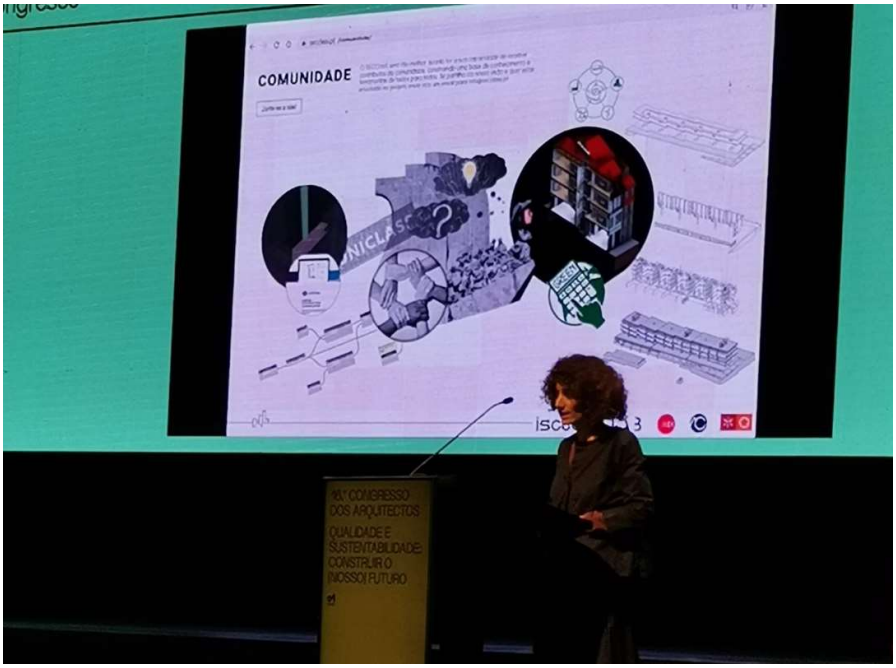
20230227- Webinar "BIM Modeling for Quantification - AIM" by Marta Campos Architects.

On February 27th, 2023, Marta Campos, an architect at Marta Campos Arquitetura e Reabilitação, hosted a webinar on "BIM Modeling for Quantification - AIM." During the webinar, she presented the BIM modelling philosophy that she has developed at her firm, which focuses on achieving projects with a high level of detail ready for construction and quantification (https://www.youtube.com/watch?v=AXjJOq3Fso4).



20230302 - SECClasS project at the Congress of the Architects' Association.

Architect Inês Almeida (from A-Lab studio) presented the SECClasS project at the 16th Congress of the Portuguese Architects' Association, under the theme "Change Matters", which took place from March 2nd to March 4th in São Miguel, Azores. The congress provided an opportunity to discuss the digital and sustainable transition in architecture. Further information can be found at https://changematters.arquitectos.pt/programa.


COMUNIDADE
XI.º CONGRESSO DOS ARQUITECTOS
QUALIDADE E SUSTENTABILIDADE: CONSTRUIR O (NOSSO) FUTURO

Communication folder

The Communication file contains communication material such as videos, news, newsletters and is in a folder shared with the SGA.

Project folder

The Project folder is available in the folder shared with the SGA, where all the contracting and award processes carried out within the scope of the project are duly documented, as well as evidence and documents produced within the scope of the activities developed. As it contains sensitive personal information (such as salary receipts and employment contracts), the link to the Project folder is provided directly by email upon request.

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Technical Indicators

Activity	Start / End	Description	Target audience	Entity	Indicator	Units/Target	Verification source	T1	T2	T3	T4 + T5	T6 + T7	T8 + T9	Final Value - % Execution
A1	01/10/2020 - 31/12/2022	Publication of project reports and dissemination of the EEA Program in the website	General Public	ISCTE-IUL	Number of readers and online references	Download / 10000	Site and Google search references to the manual	NA	Linkedin: 230 page views Twitter: 574 impressions Visualizações Youtube: 40 (cumulative)	Linkedin: 464 views Twitter: 3100 impressions Visualizações Youtube: 175 (cumulative)	Linkedin: 572 views Twitter: 4371 impressions Visualizações Youtube: 348 (cumulative)	Linkedin: 750 views Twitter: 5753 impressions Visualizações Youtube: 1087 Website: 9400 pageviews (cumulative)	Linkedin: 1328 views Twitter: 6419 impressions Visualizações Youtube: 1458 Website: 15100 pageviews *(cumulative)*	(1238+6419+1458+15100)/10K - 242%
A2	01/11/2020 - 30/04/2021	Online publication of the report of the framework review and Classification Information Construction System (CICS) selection	Construction Industry professionals, Academic and Research comunity	LNEC	Number of readers and online references	Download/ 250	Site and Google search references to the manual	NA	NA	Monitoring of downloads started in July 21	82 downloads (cumulative)	155 downloads (cumulative)	268 downloads (cumulative)	268/250 - 107%
A3	01/03/2021 - 31/09/2022	Online publication and continuous update, improvement and utilization monitoring of the Classification system, published in the form of downloadable tables, online tool and BIM software files. Dissemination of the system's manual	Construction Industry professionals	ISCTE-IUL	Downloads of the CICS + interactions with users through the feedback form	Persons / 2000	Site statistics	NA	NA	NA	System was made available at the end of December 2021	Download SC tables: 494 Comments on search tool: 217	Download SC tables: 918 Comments on search tool: 265	(918+256)/2K - 59%
A4	01/11/2020 - 31/09/2022	Publication of the National BIM Objects Guidelines Manual.	Construction Industry professionals	UMINHO	Number of manual downloads	Download/ 250	Site and Google search references to the manual	NA	NA	NA	101 downloads (cumulative)	217 downloads (cumulative)	497 downloads (cumulative)	497/250 - 199%

Activity	Start / End	Description	Target audience	Entity	Indicator	Units/Target	Verification source	T1	T2	T3	T4 + T5	T6 + T7	T8 + T9	Final Value - % Execution
A4	01/11/2020 - 31/09/2022	Online publication, enrichment, improvement and utilization monitoring of the BIM Objects library.	Construction Industry professionals	UMINHO	Number of downloaded BIM objects	Download/ 2000	Library statistics	NA	NA	NA	NA	NA	69 downloads (cumulative)	69/2000 - 3%
A5	01/04/2021 - 31/12/2022	Online publication, enrichment and utilization monitoring of the Webtool for Construction elements and materials query.	Construction Industry professionals	ISCTE-IUL	Number of queries to the online tool	Persons / 10000	Webtool statistics	NA	NA	NA	Tool was made available at the end of December 21	4891 queries (cumulative)	6209 queries (cumulative)	6209/10K - 62%
A6	02/05/2021 - 31/12/2022	Validation of the project methodology on real-world pilot buildings and publication of the reports.	Construction Industry professionals	LNEC	Buildings in the pilots	Building Models / 3	Project and Partners report	NA	NA	NA	Two pilots have been built but not yet publicly available	1 building model	5 building models	5/3- 167%
A7	01/10/2020 - 31/12/2022	Dissemination of program and project goals to the general public in science events.	General Public	ISCTE-IUL	Persons reached in science and technology events, newsletter and social networks	Persons / 5000	Project and events report, newsletter and social network statistics	NA	NA		250 (estimate) Participation in the Smart Cities Summit	2nd Newsletter (150)	Participation in Antena 1 on the 20221115 - SECClasS na Antena 1 – 90 segundos de Ciência – 5000 persons SECCLASS on the Magazine of the National Engineers Association, INGENIUM N.º 177 (tiragem 49000) 3rd Newsletter (170)	> 10.000 - 200%

A7	01/10/2020 - 30/09/2022	Trainning of Construction Industry Professionals to use the tools. Organization of 2 workshops, presence in industry fairs and publication of scientific papers	Construction Industry professionals	ISCTE-IUL	Construction Industry professionals in training	Persons / 600	Project and events reports	NA	NA	120 participantes no 1º Webinar + 52 visualizações do vídeo	80 participants in the Classification Systems Event + 103 video views 50 participants (estimated) SEEClasS in Round Table of Closer Project 60 participants in the Presentation at CT 197 General Assembly	Round table for the closing of the Closer project Conference: Digital transformation at the service of sustainable construction (OE) - 48 Participants Tektonica (stand+TekTalk) 180 people PTBIM 2022. Plenary Session + Paper Presentations + Workshop 300 people - Open meeting - Construction Classification System SECClasS - Use, tools and review 70 participants	Practical Seminar How to do a sustainability analysis with BIM TODAY? 14 July - 50 participants. Event on the 2022.07.14 - Practical Workshop: How to do a sustainability analysis with BIM today? – 60 persons Participation on event on the 2022.10.12 - SECClasS in event Circular Economy in Concreta – 60 persons Event on the 2022.11.12 - SECClasS presented on the Brown Bag Tech Talk at Iscte – 20 persons Event on the 20221112 - The final event of the SECClasS project at the National Laboratory for Civil Engineering – 70 persons Event on the 2023.02.27- Webinar "BIM Modeling for Quantification - AIM" by Marta Campos Architects – 83 persons	1450/650 - 223%

Activity	Start / End	Description	Target audience	Entity	Indicator	Units/Target	Verification source	T1	T2	T3	T4 + T5	T6 + T7	T8 + T9	Final Value - % Execution
													Participation on event on the 2023.03.02 - SECClasS project at the Congress of the Architects' Association. – 50 persons	